

**IN THE CLAIMS:**

Please amend claims 1, 2, 4, 13, 15 and 23-26 as follows.

1. (Currently Amended) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a ~~source~~customer domain, a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from the customer domain.

2. (Currently Amended) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a ~~source~~customer domain, a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , marking comprises determining if the sending rate estimate is less than a first rate threshold and in response to a determination that the sending rate estimate is less than the first rate threshold, setting a probability of marking at least one data packet with a first selected priority level is one of a plurality of priority levels, wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from the customer domain.

3. (Previously Presented) The method of claim 2, further comprising

in response to a determination that the  $s$  is less than the first rate threshold, incrementing a burst size.

4. (Currently Amended) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a ~~source~~customer domain, a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , marking comprises determining if the sending rate estimate is between a first rate threshold and a second rate threshold and in response to a

determination that the sending rate estimate is between a first rate threshold and a second rate threshold, setting a probability of marking a data packet with a subordinate priority level based on  $s$ , wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from the customer domain.

5. (Previously Presented) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a source; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , marking comprises determining if the sending rate estimate is between a first rate threshold and a second rate threshold and in response to a determination that the sending rate estimate is between a first rate threshold and a second rate threshold, marking a data packet such that a rate of packets marked a subordinate policy level is no greater than  $1 - \text{first rate threshold}/s$ .

6. (Previously Presented) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a source; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , marking comprises determining if the sending rate estimate is above a second rate threshold and in response to a determination that the sending rate estimate is above the second rate threshold, marking the packet such that a rate of packets marked the second priority level is at least  $(\text{second rate threshold} - \text{first rate threshold})/s$ .

7. (Previously Presented) The method of claim 6, further comprising in response to a determination that the sending rate is above the second rate threshold, marking the packet such that a rate of packets marked a lowest priority level is at least  $(s - \text{second rate threshold})/s$ .

8. (Previously Presented) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a source; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ ;

determining if the sending rate estimate is greater than a rate threshold;

in response to a determination that the sending rate estimate is greater than the rate threshold, determining if a burst size is greater than a minimum burst; and

in response to a determination that the burst size is greater than the minimum burst, marking the packet a first priority level.

9. (Previously Presented) The method of claim 8, further comprising in response to a determination that the burst size is greater than the minimum burst, decrementing the burst size.

10. (Previously Presented) A method, comprising:

determining a sending rate estimate,  $s$ ;

determining any credits or debits for a packet stream including a plurality of data packets from a source; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ ;

determining if the sending rate estimate is greater than the super rate threshold, determining if a burst size is greater than a minimum burst; and

in response to a determination that the burst size is greater than a minimum burst, marking the packet a priority level based on a count of packets marked a highest priority level during a period.

11. (Previously Presented) The method of claim 10, further comprising in response to a determination that the burst size is greater than the minimum burst, decrementing the burst size.

12. (Currently Amended) An apparatus, comprising:

a first determining unit configured to determine a sending rate estimate,  $s$ ; and

a second determining unit configured to determine any credits or debits for the packet stream, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

a marking unit configured to probabilistically mark the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from a customer domain.

13. (Currently Amended) An apparatus, comprising:

a first determining unit configured to determine a sending rate estimate,  $s$ ; and

a second determining unit configured to determine any credits or debits for the packet stream, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

a marking unit configured to probabilistically mark the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , wherein the packet

marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from a customer domain, the marking unit comprising

a third determining unit configured to determine if the sending rate estimate is less than a first rate threshold; and

a setting unit configured to set a probability of marking at least one data packet with a first selected priority level to a first value, ~~said—means—~~responsive to a determination that the sending rate estimate is less than the first rate threshold, wherein said first selected priority level is one of a plurality of priority levels.

14. (Previously Presented) The apparatus of claim 13, further comprising a unit configured to increment a burst size, in response to a determination that the  $s$  is less than the first rate threshold.

15. (Currently Amended) An apparatus, comprising:

a first determining unit configured to determine a sending rate estimate,  $s$ ; and

a second determining unit configured to determine any credits or debits for the packet stream, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

a marking unit configured to probabilistically mark the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a

plurality of data packets from a customer domain, the marking unit comprising a third determining unit configured to determine if the sending rate estimate is between a first rate threshold and a second rate threshold; and

a setting unit configured to set a probability of marking a data packet with a subordinate priority level based on  $s$ , ~~said means~~ responsive to a determination that the sending rate estimate is between a first rate threshold and a second rate threshold.

16. (Previously Presented) The apparatus of claim 12, wherein the mark unit comprises a determining unit configured to determine if the sending rate estimate is between a first rate threshold and a second rate threshold and another marking unit configured to mark a data packet such that a rate of packets marked a subordinate priority level is no greater than  $1 - (\text{first rate threshold} / s)$  in response to a determination that the sending rate estimate is between a first rate threshold and a second rate threshold.

17. (Previously Presented) An apparatus, comprising:

a first determining unit configured to determine a sending rate estimate,  $s$ ; and

a second determining unit configured to determine any credits or debits for a packet stream including a plurality of data packets from a source, a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and



a marking unit configured to probabilistically mark packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , the marking unit comprising a third determining unit configured to determine if the sending rate estimate is above a second rate threshold ; and

a marking unit configured to mark the packet such that a rate of packets marked the second priority level is at least  $(\text{second rate threshold} - \text{first rate threshold})/s$ , in response to a determination that the sending rate estimate is above the second rate threshold .

18. (Previously Presented) The apparatus of claim 17, further comprising another marking unit configured to mark the packet such that a rate of packets marked a lowest priority level is at least  $(s - \text{second rate threshold})/s$ , in response to a determination that the sending rate is above the second rate threshold .

19. (Previously Presented) An apparatus, comprising:

a first determining unit configured to determine a sending rate estimate,  $s$ ; and

a second determining unit configured to determine any credits or debits for a packet stream including a plurality of data packets from a source, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met;

a marking unit configured to probabilistically mark the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ ;

a third determining unit configured to determine if the sending rate estimate is greater than a rate threshold;

a fourth determining unit configured to determine if a burst size is greater than a minimum burst, in response to a determination that the sending rate estimate is greater than the rate threshold; and

another marking unit configured to mark the packet a first priority level, in response to a determination that the burst size is greater than a minimum burst.

20. (Previously Presented) The apparatus of claim 19, further comprising a decrementing unit configured to decrement the burst size, in response to a determination that the burst size is greater than the minimum burst.

21. (Previously Presented) An apparatus, comprising:

a first determining unit configured to determine a sending rate estimate,  $s$ ; and

a second determining unit configured to determine any credits or debits for a packet stream including a plurality of data packets from a source, a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met;

a marking unit configured to probabilistically mark the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ ;

a third determining unit configured to determine if the sending rate estimate is greater than a super rate threshold;

a fourth determining unit configured to determine if a burst size is greater than a minimum burst, in response to a determination that the sending rate estimate is greater than the super rate threshold; and

another marking unit configured to mark the packet a priority level based on a count of packets marked a highest priority level during a period, in response to a determination that the burst size is greater than a minimum burst.

22. (Previously Presented) The apparatus of claim 21, further comprising a decrementing unit configured to decrement the burst size, in response to a determination that the burst size is greater than the minimum burst.

23. (Currently Amended) A method, comprising:

determining a first probability by using a first algorithm;

determining at least one second probability by using a second algorithm, the first algorithm being different from the second algorithm; and

weighting each probability so that each probability contributes to a net probability, wherein the weighting comprises determining any credits or debits for a packet stream

including a plurality of data packets from a source, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met, wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from a customer domain.

24. (Currently Amended) A computer program embodied within a computer readable medium, when executed the computer program includes means for marking a packet stream including a plurality of data packets from a source by performing:

determining a sending rate estimate,  $s$ ; and

determining any credits or debits for the packet stream, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate,  $s$ , wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from a customer domain.

25. (Currently Amended) A system for marking a packet stream including a plurality of data packets from a source, comprising:

a metering tool for determining a sending rate estimate,  $s$ ; and

a determining means for determining any credits or debits for the packet stream, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

a router for probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate, s, wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from a customer domain.

26. (Currently Amended) An apparatus for marking a packet stream including a plurality of data packets from a source comprising:

a metering tool for determining a sending rate estimate,  $s$ ; and

a determining component for determining any credits or debits for the packet stream, wherein a probability marking of the packet stream is improved while there is a sufficiently accumulated credit and when a first criterion is met; and

a marking component for probabilistically marking the packet stream to one of a plurality of priority levels based on the sending rate estimate, s, wherein the packet marking is on a flow-aggregate or aggregate basis for the packet stream including a plurality of data packets from a customer domain.